

PROCESS TO MAKE DECISION ON WHEN TO ALTER UPSTREAM BURST PROFILE  
BASED UPON PACKET LOSS PERCENTAGE USING HYSTERESIS THRESHOLDS

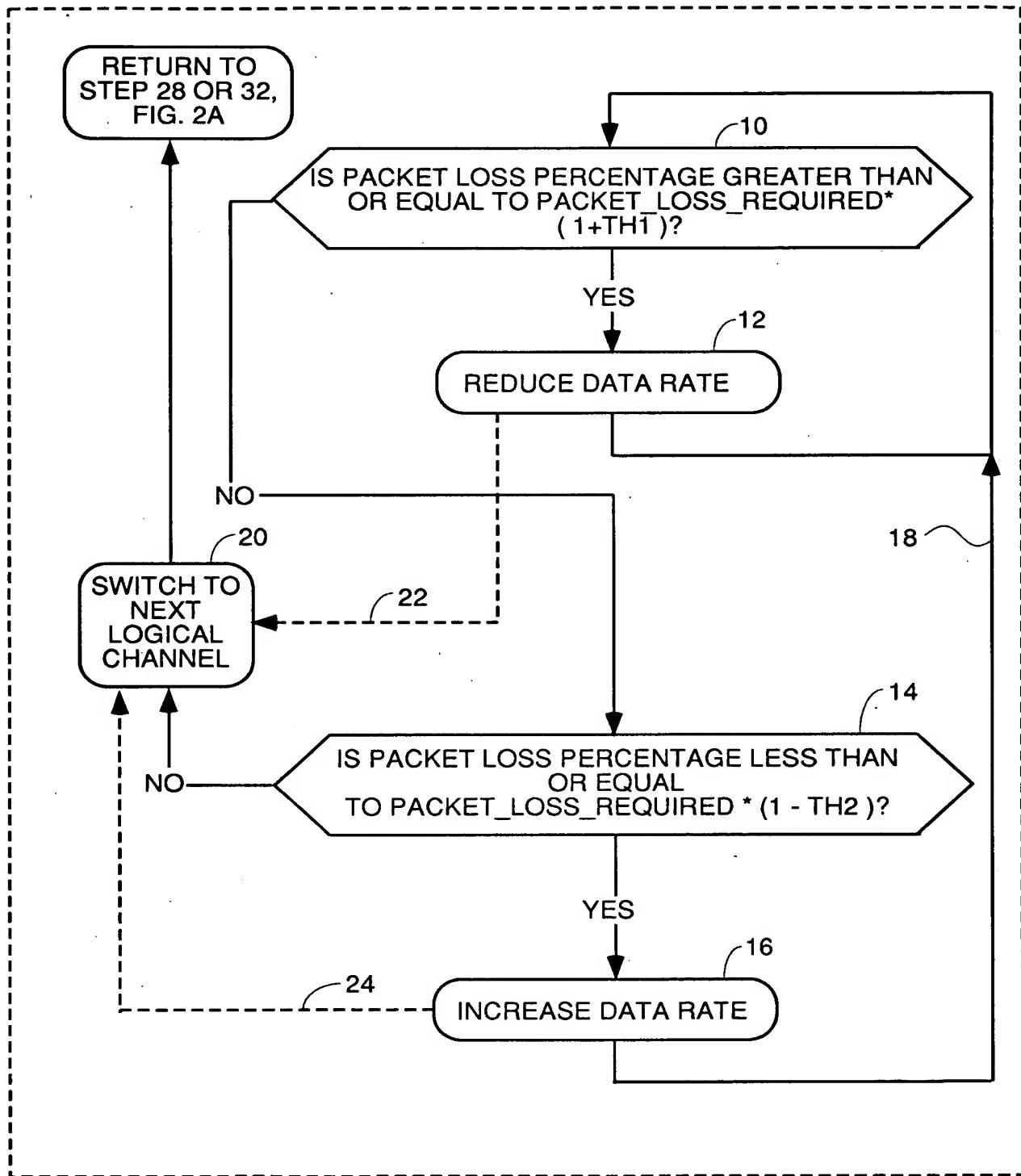
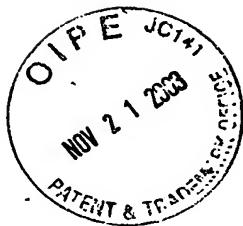


FIG. 1



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CMTS PROCESSING FOR AUTOMATIC RATE ADAPTATION WITH CHANGING NOISE

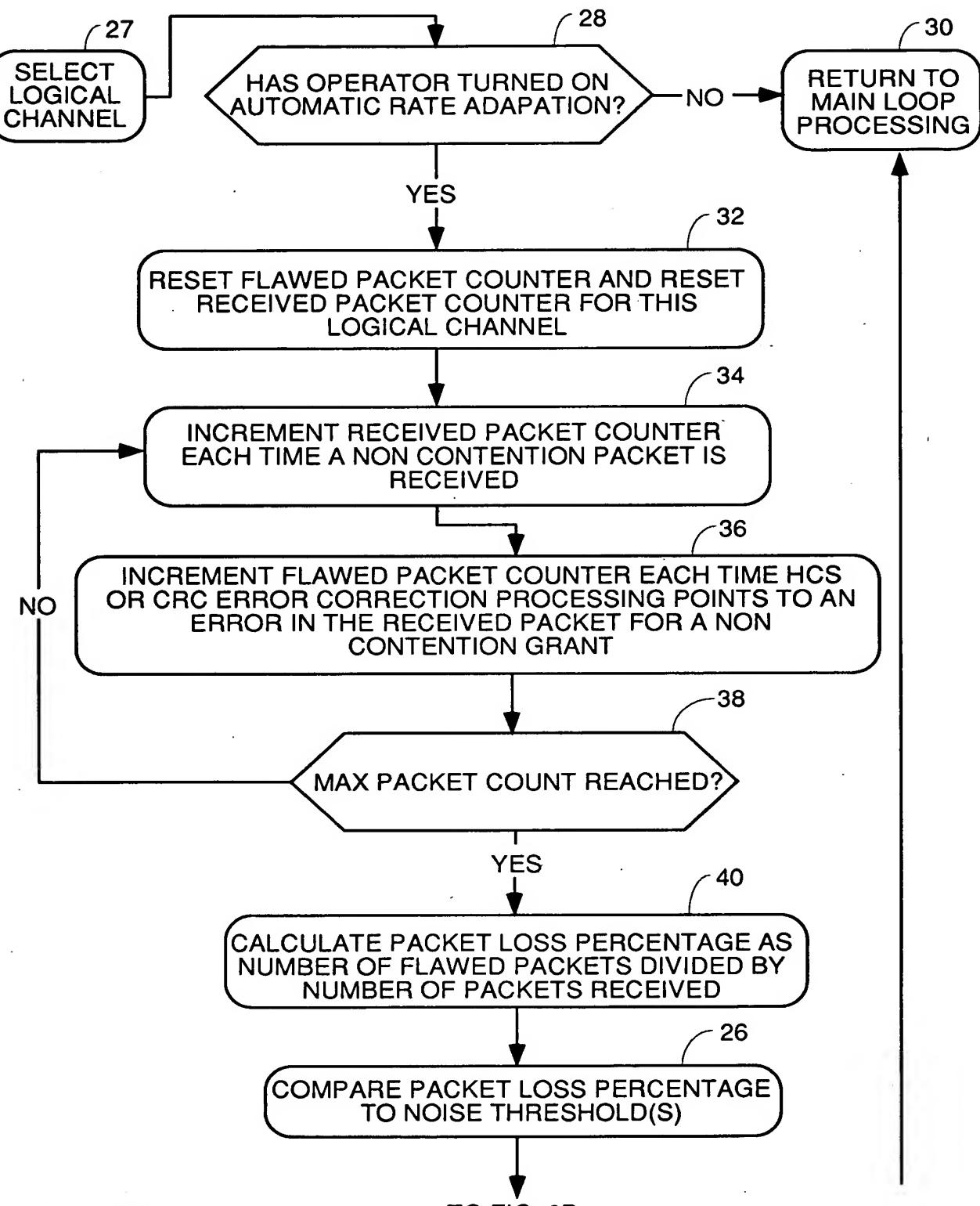
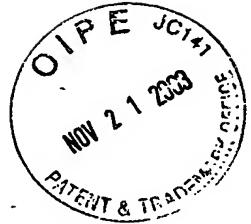


FIG. 2A



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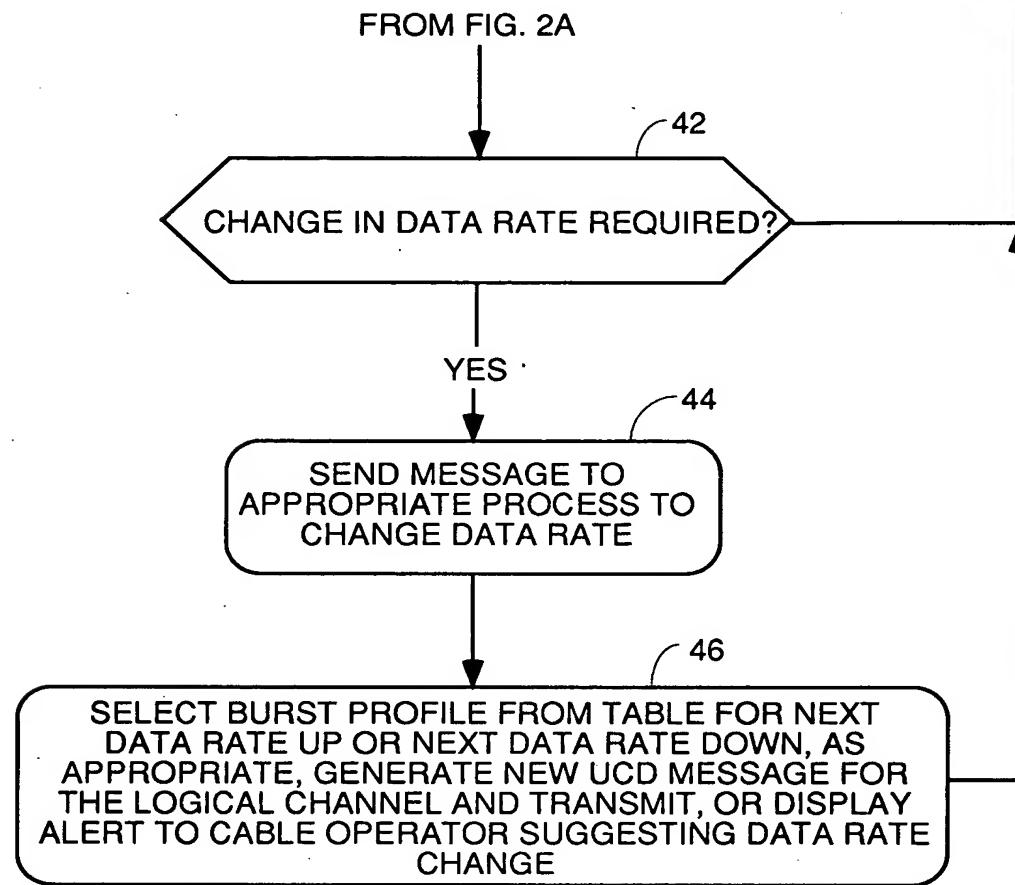
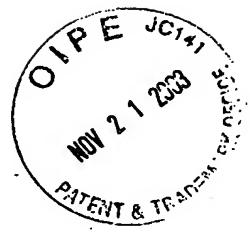


FIG. 2B



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### CMTS PROCESSING FOR AUTOMATIC RATE ADAPTATION WITH CHANGING NOISE

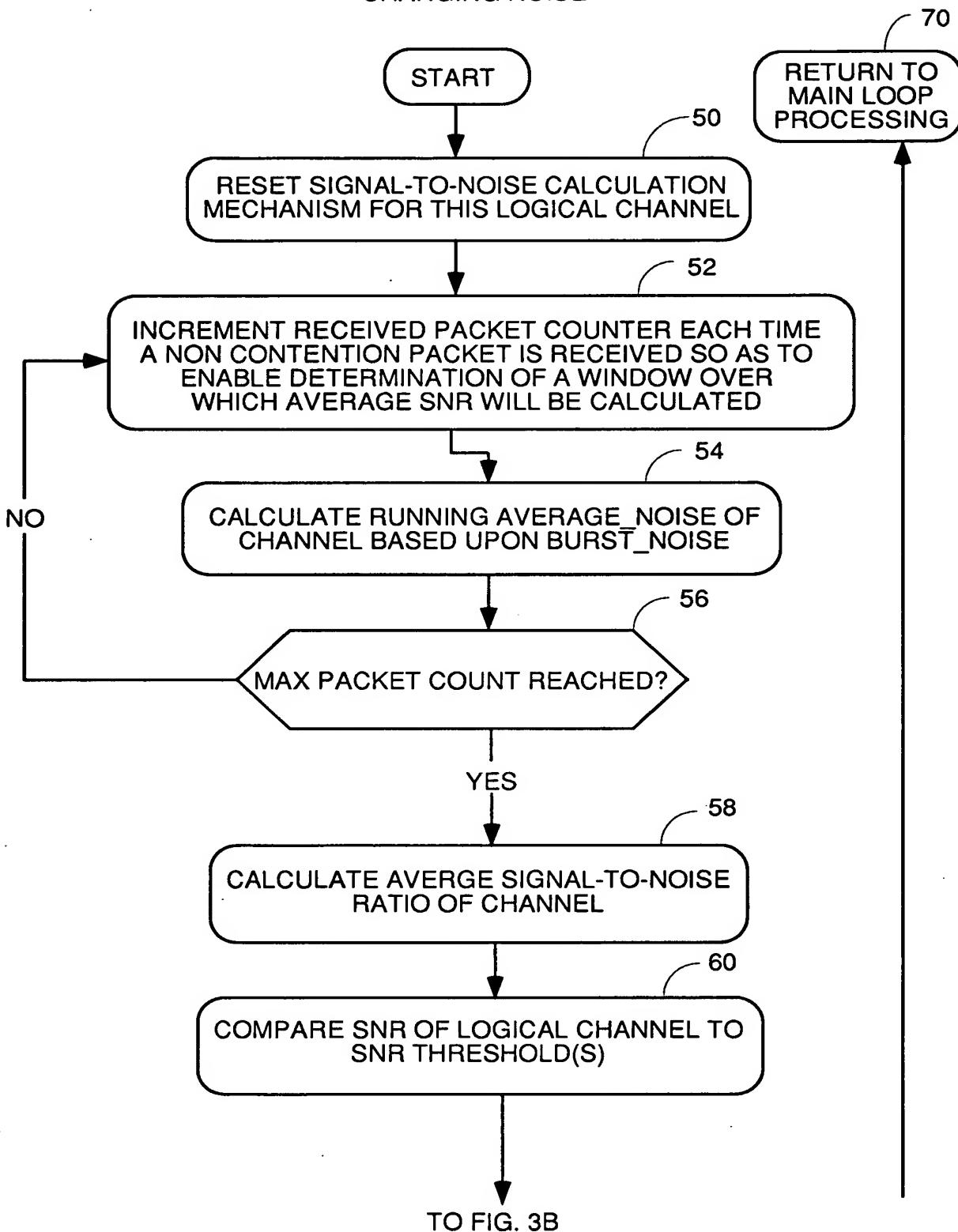


FIG. 3A

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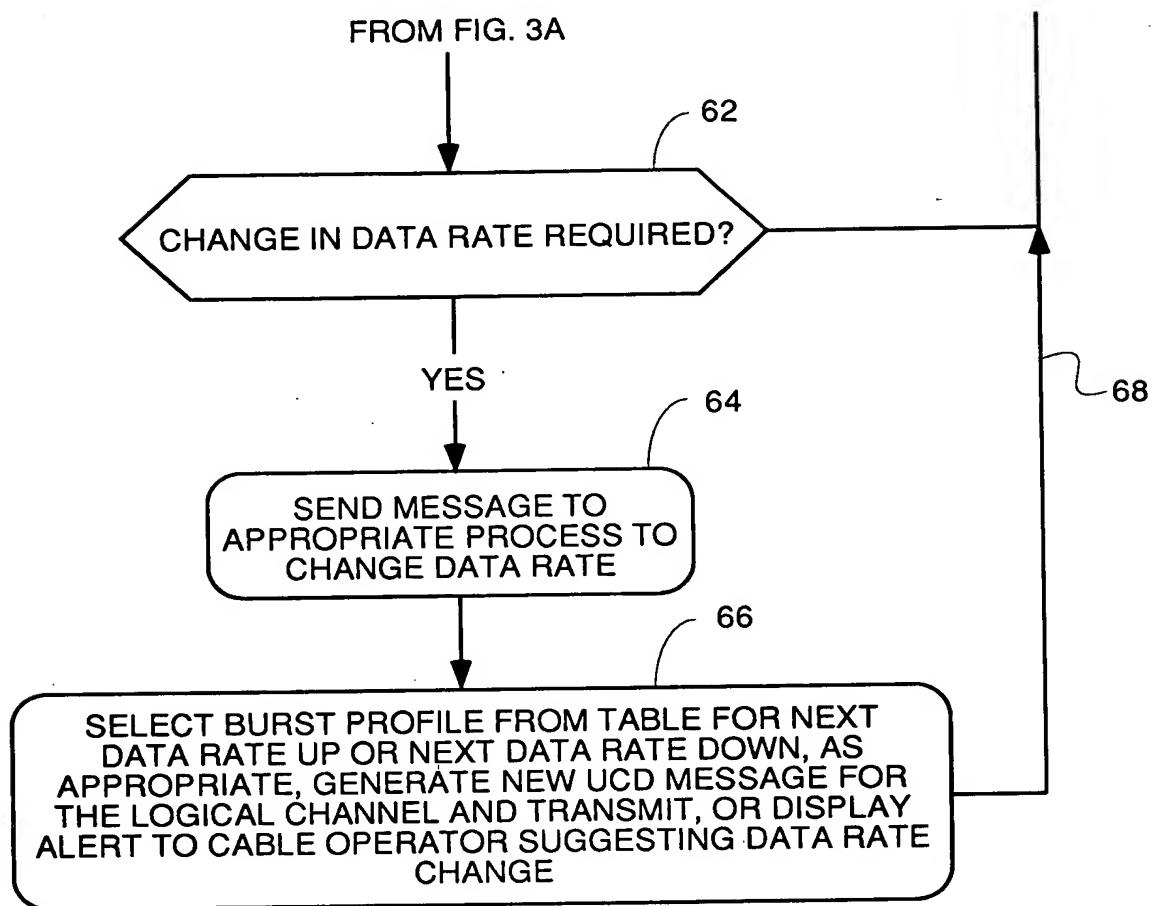


FIG. 3B

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PROCESS FOR AUTOMATIC RATE ADAPTATION USING BIT ERROR RATE AND BYTE ERROR RATE

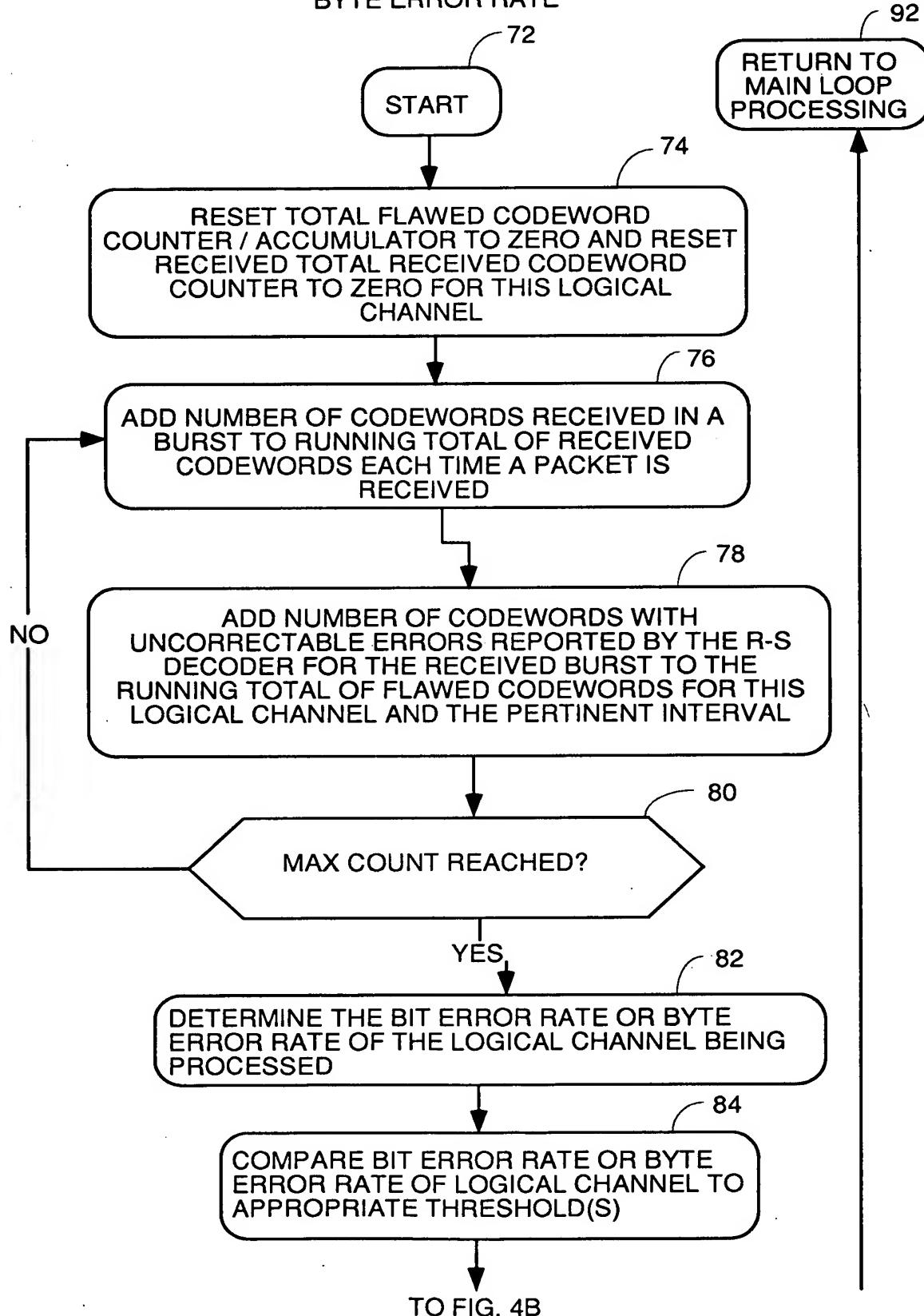


FIG. 4A



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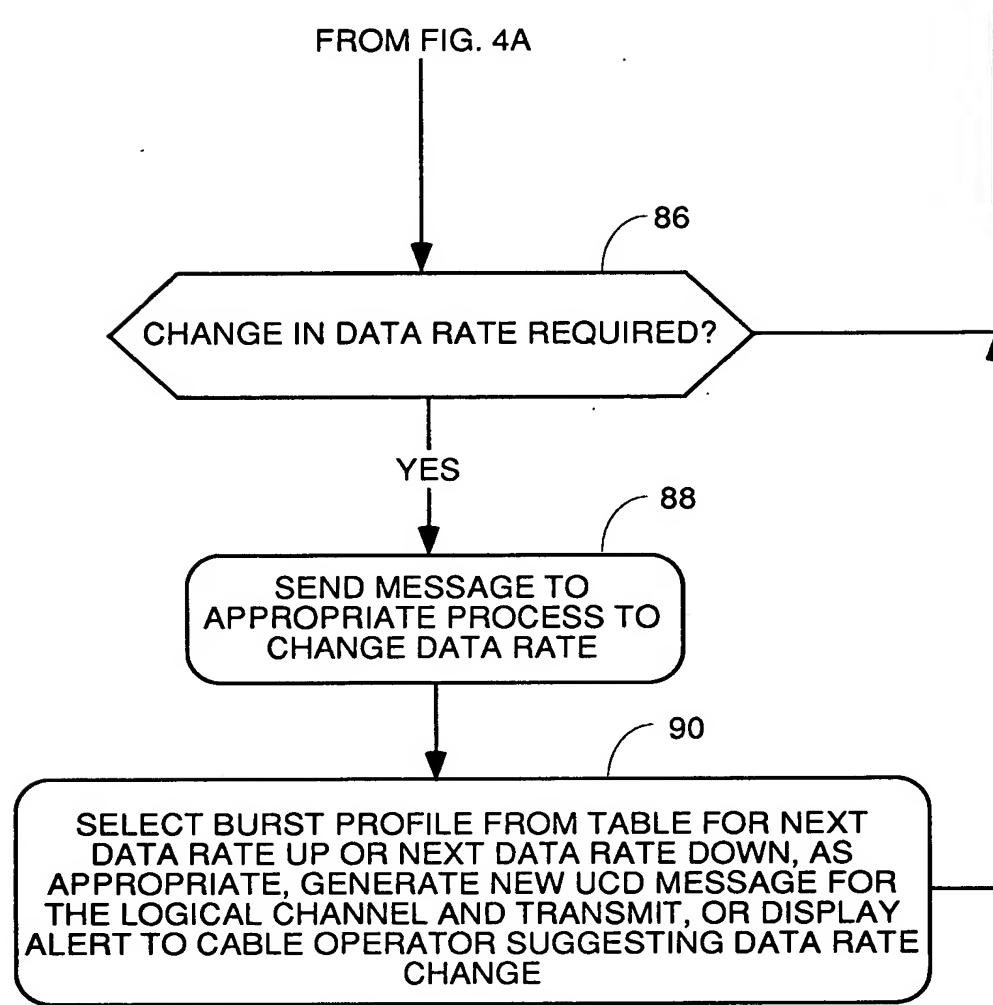
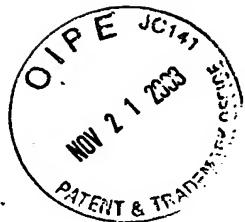


FIG. 4B



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GENERIC PROCESS TO AUTOMATICALLY DETECT THE NEED TO ADAPT BIT RATE TO NOISE CONDITIONS ON A LOGICAL CHANNEL AND AUTOMATICALLY CHANGE BIT RATE

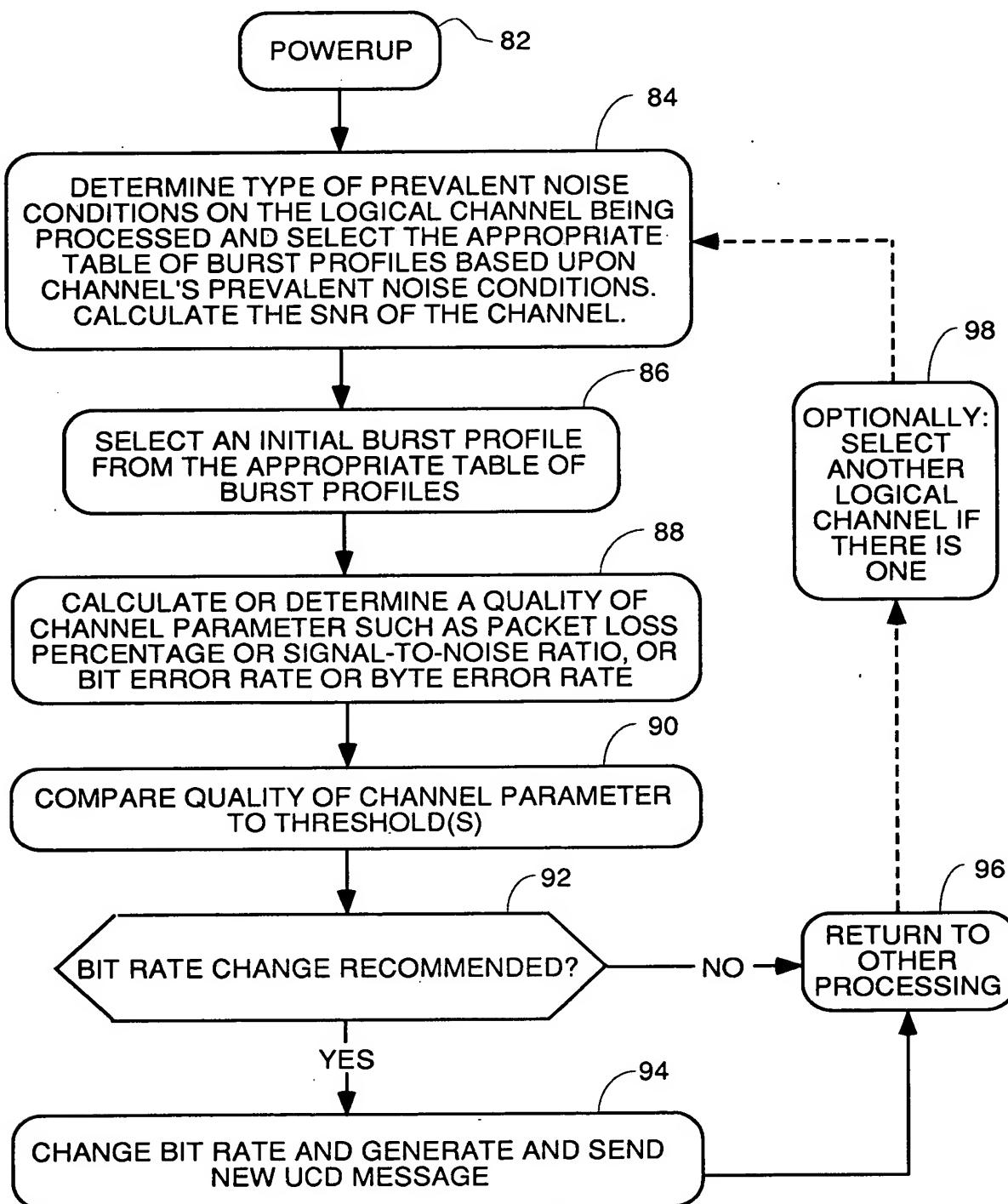
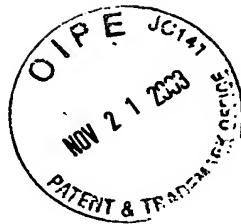


FIG. 5



GENERIC PROCESS TO AUTOMATICALLY DETECT THE NEED TO ADAPT BIT RATE TO NOISE CONDITIONS ON A LOGICAL CHANNEL AND GENERATE MESSAGE

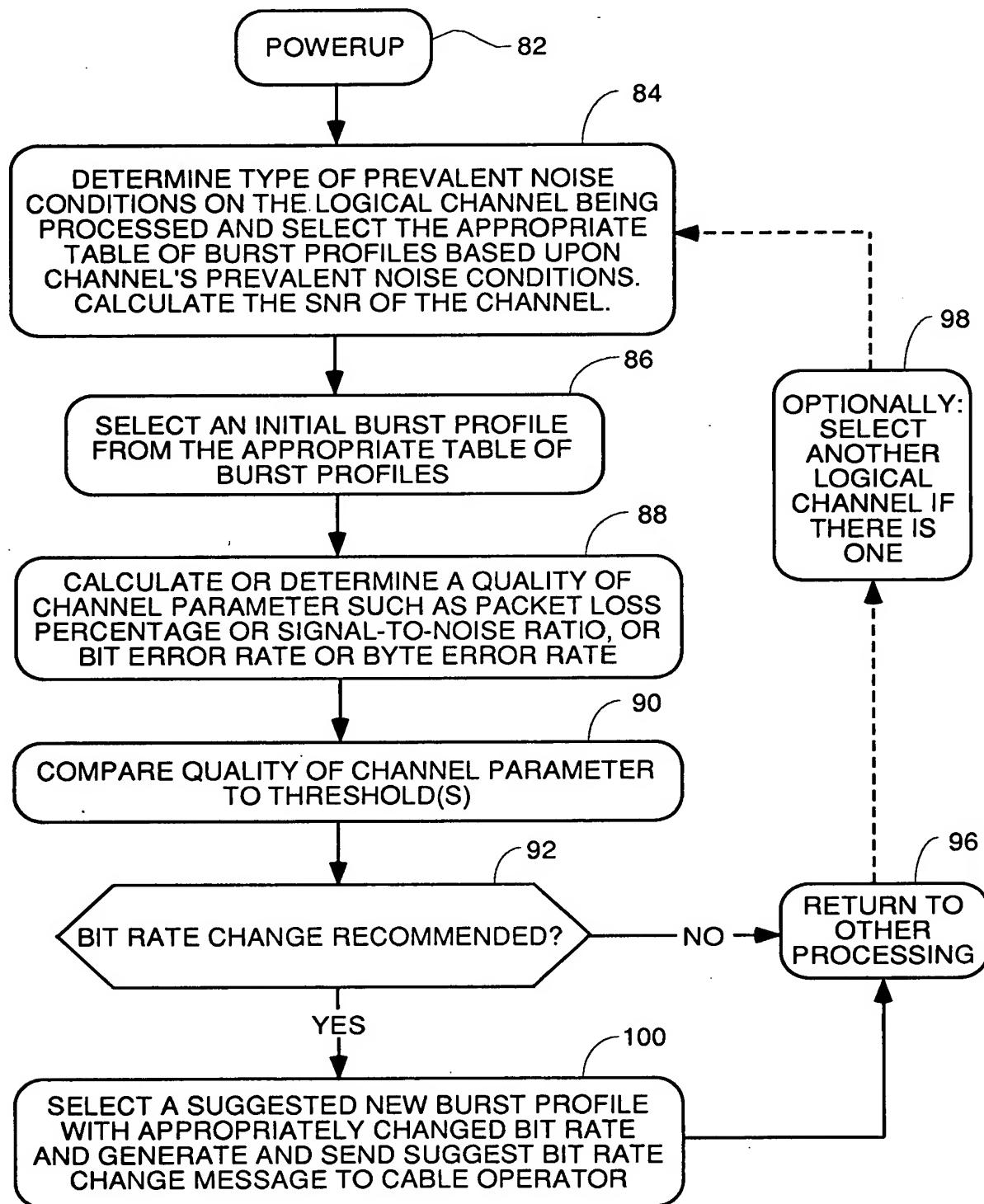
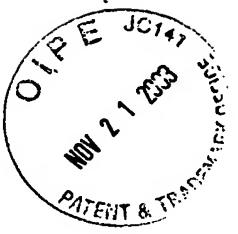


FIG. 6



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EXAMPLE OF BURST PROFILES OF DATA FOR DIFFERENT AWGN SNR  
 FOR DOCSIS 1.X

#	USE FOR IMPULSE NOISE CHANNEL YES/NO	% BIT RATE FROM MAX	NET DATA RATE @ 2.56 Mbps	MODULATION	RS
1	y	22%	2.3 Mbps	QPSK	k=16, t=10
2	y	29%	3.0 Mbps	QPSK	k=28, t=10
		<del>3.8 Mbps</del>	<del>3.8 Mbps</del>	<del>QPSK</del>	<del>k=58, t=10</del>
3	y	39%	4.0 Mbps	QPSK	k=78, t=10
4	n	46%	4.7 Mbps	QPSK	k=235, t=10
5	y	50%	5.1 Mbps	16-QAM	k=20, t=10
		<del>6.0 Mbps</del>	<del>16-QAM</del>	<del>16-QAM</del>	<del>k=28, t=10</del>
6	y	62%	6.4 Mbps	16-QAM	k=39, t=10
		<del>7.5 Mbps</del>	<del>16-QAM</del>	<del>16-QAM</del>	<del>k=55, t=10</del>
7	y	79%	8.1 Mbps	16-QAM	k=78, t=10
8	y	92%	9.4 Mbps	16-QAM	k=235, t=10
9	n	100%	10.24 Mbps	16-QAM	k=16, t=0

FIG. 7

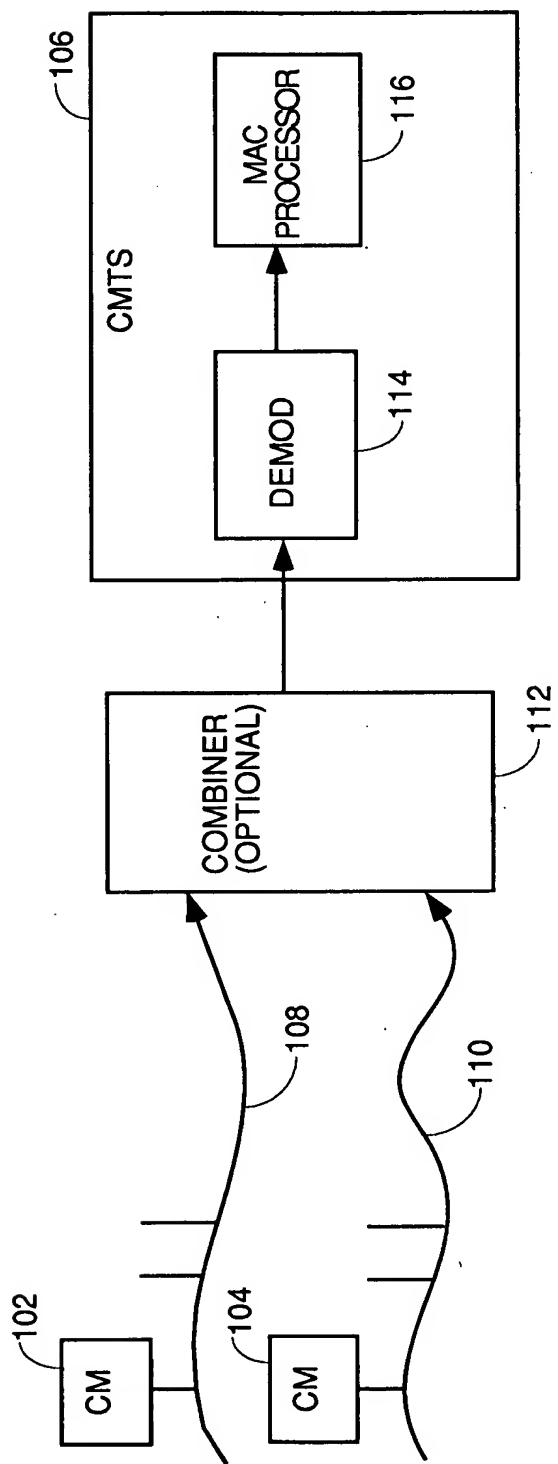
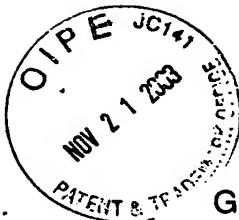


FIG. 8



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GENERIC PROCESS TO AUTOMATICALLY DETECT THE NEED TO ADAPT BIT RATE TO NOISE CONDITIONS ON A LOGICAL CHANNEL AND ADJUST THE BIT RATE

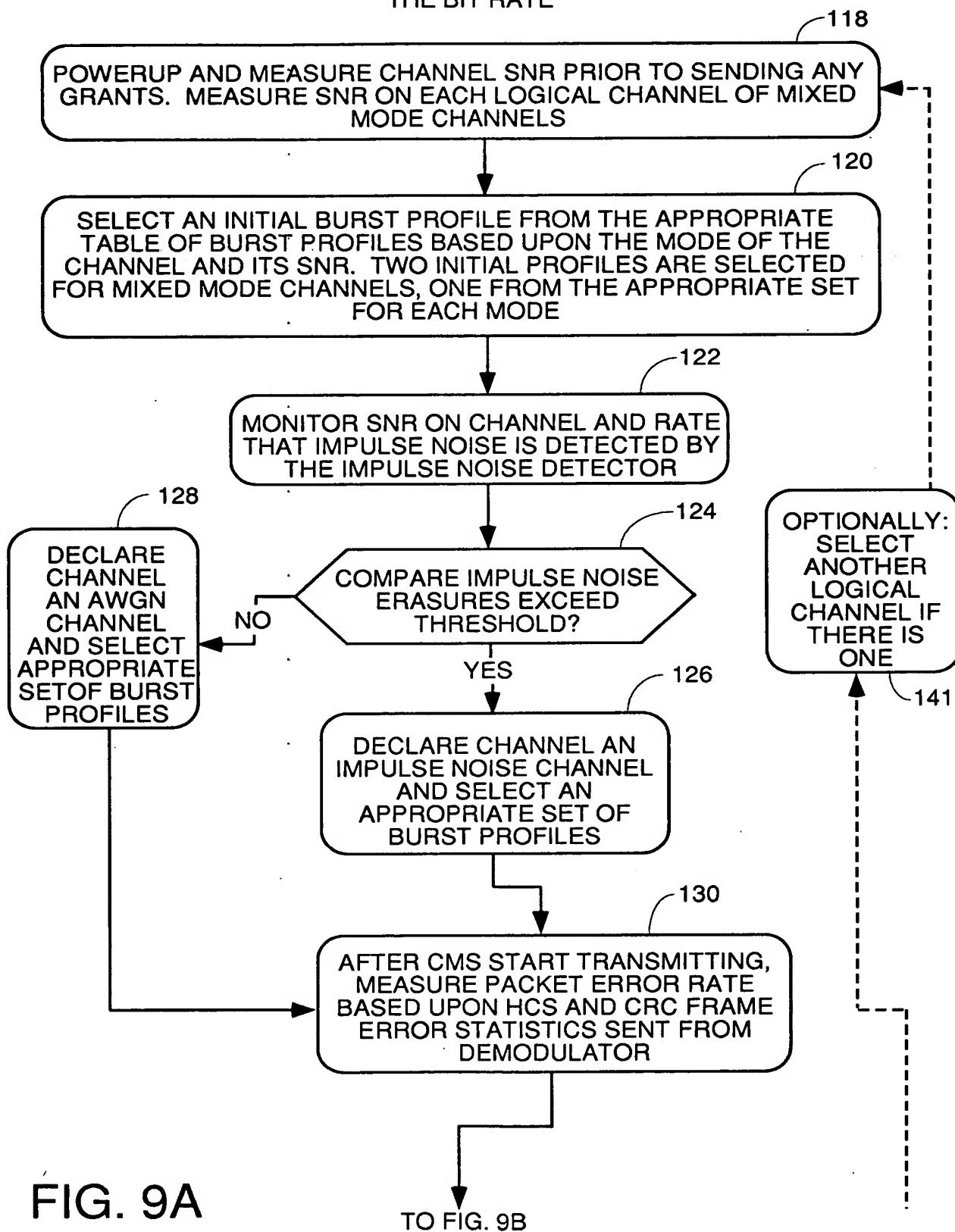
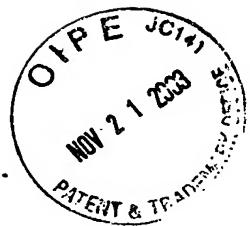


FIG. 9A

TO FIG. 9B



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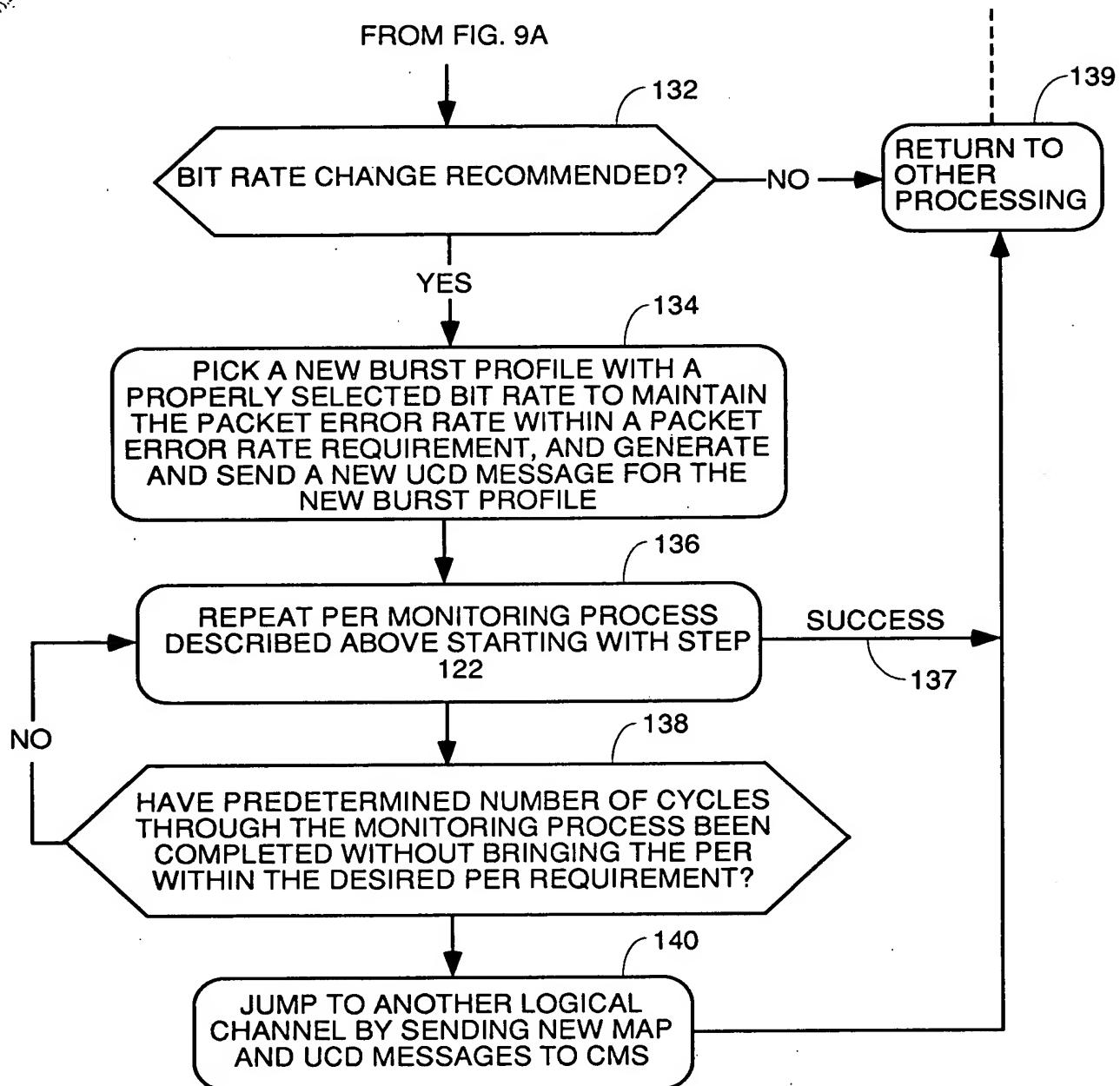


FIG. 9B